Strategic Concepts In Disaster Cost Recovery for Local Government Presented by Mike Martinet, MS, CEM Copyright 2018 © by The Martinet Group, LLC	
2	I want to change your world. By that, I mean I want to change your understanding of the world of disaster cost recovery.
3	Contents come from Congressional testimony, Congressional research reports, a McKinsey & Co white paper, DHS-OIG audits, FEMA appeals cases, my colleagues across the country and my from experience teaching and working with clients.
4	I've been teaching disaster cost recovery for nearly 20 years. I find that the deeper I get into the minutiae of the process, the greater my strategic perspectives have become and that is what I want to share with you today, the long view of disaster cost recovery and how to be better prepared for a day that many of us will have to face here in California.
5	What is the disaster? Is it the crisis event and its immediate physical impacts, or the long term inability to financially recover and restore our communities?
6	"Estimates suggest that the United States has a disaster-related unfunded liability that could be even greater than that of Social Security (up to $7.1 trillion versus $4.9 trillion)."[1]
	There have been 13 disasters since 2000 that have each cost FEMA more than $500 million
	FEMA's disaster-relief budget now exceeds $5 billion a year -- more than double what it was at the beginning of the Obama administration.
7	"Although more governments everywhere are experiencing natural disasters, the process of learning from these experiences has barely begun. Recovery remains surprisingly difficult for all governments, including, in the United States, the local and state governments at the front lines of recovery implementation." [2]
8	"Nevertheless, the vast majority of state and local governments facing disaster have rarely, if ever, experienced disaster before and thus are not well positioned to draw on their own experience quickly." [3]

[1]Federal Financial Exposure to Natural Catastrophe Risk, University of Chicago Press, February 2010.

[2]Improving Disaster Recovery: Lessons Learned in the United States, McKinsey & Co., June 2015

[3]See Footnote 2

9	A disaster Public Assistance grant may be the most dangerous grant a local government agency can receive. These FEMA grants often promise the financial assistance necessary to restore your disaster damaged world, only to have that same funding whisked away months or years after the award is made. The typical retention of funds is only 40% to 50% of an agency's total disaster losses.
10	FEMA's PA program is a complex and continuously evolving system. We need a strong set of fundamental capabilities to be able to effectively respond to its challenges.
11	FEMA has 44 different grant programs with no single fixed set of administrative requirements. Because your agency can effectively handle EMPG, SHSGP, UASI and other programmatic Federal grants is no assurance that your agency will have the same degree of success with FEMA Public Assistance grants.
11	There are several criteria for PA, IA and SBA declarations. Besides the dollar losses, the role of fatalities and the socio-economic conditions within a community will affect these declarations.
12	Complicating the cost recovery process is the fact that there are many other Federal agencies in addition to FEMA involved in disaster response, community rebuilding, and financial recovery.
13	Competition from other disasters, the media, the public and government interest in the disaster will quickly fade from center stage and local government will be on its own sooner than they may otherwise expect.
14/ 15	Today's disaster cost recovery is very different from previous years. The farther back you go, the greater the differences. Today the rules for Public Assistance are more strict than in previous years, as a result of both economic pressure and fraud. Audits are getting more dangerous.
16	In 2015, Louisiana finished writing the last Katrina project worksheet. Now, FEMA is looking at deobligating $812 million for approved projects which have not yet been built. In 2014 FEMA began to deobligate $275 million dollars from cities and counties in Florida from the 2004-2005 hurricanes.
17	In the last 14 years, only 100 Net Small Project Overruns have been filed. This tells me that of hundreds of disasters and thousands of applicants, the applicants are not well enough organized to manage their small projects to know what the final status of those projects is and they are not well enough organized to file the Net Small Project Overruns in a timely manner.

18	According to FEMA, 52% of Project Worksheets are under $10,000, Why are agencies writing so many small projects. The paperwork for a $120,000 project is not going to be much more complex than for a $10,000 Project Worksheet. Why do agencies needlessly increase their workloads? [Small project slide]
19	To put this all into perspective, let me ask you one single question: When was the last time you saw a comment good, bad or indifferent about disaster cost recovery in an After Action Report? Not a comment about the Emergency Operations Center Finance and Administration Section, but about the disaster cost recovery process?
Why Disaster Cost Recovery Planning Is Important Now.	
20	Most of the things we can do to improve total cost recovery can only be done before the event occurs. Adopt relevant policies for purchasing, feeding, pay, and donations; create working procedures; Establish pre-disaster damage benchmarks; Train cost recovery staff; Implement new standard procedures to comply with FEMA requirements
21	When a disaster happens we won't have time to learn what to do. When the disaster occurs, we will make mistakes while trying to adapt to unfamiliar and complex FEMA regulations.
22	We must possess a broad and comprehensive understanding of Public Assistance grant management principles, administrative procedure, community recovery, building codes, construction practices, property insurance, sometimes zoning and flood plain ordinances, environmental and historic preservation concerns, and financial management practices. And we need to be masters of extensive and well organized documentation
23	Applicants are often ill-informed about the Public Assistance program due to the infrequent and unpredictable nature of disasters, this leads to misunderstandings during the cost recovery process.
24	Applicants are often behind the regulatory curve due to continual changes in FEMA rules. It is too much to learn all at once when the disaster occurs.
25	When a disaster occurs, we at the local level are mentally and physically fatigued; and we are working with severely diminished financial resources given the number of problems we face.
26	Once the disaster occurs, we will revert to past learned behaviors, which usually don't meet FEMA's requirements.

27	We will be in direct, hard competition with the private sector for the very same resources, in both consulting and construction services following the disaster; a competition that they will likely do better at because they have fewer regulatory restrictions to follow.
28	FEMA is not primarily focused on the long term big issues of disaster cost recovery. These are Congressional policy matters. Regulations are almost always behind the curve of current practices and current knowledge.
Overview of Federal Disaster Cost Recovery Principles	
29	Disaster response and recovery are primarily the responsibility of local government first; then the state; and lastly the Federal government. Federal Public Assistance program was always intended to SUPPLEMENT local funds, insurance payments and state financial assistance.
30	FEMA provides limited financial help under limited and increasingly restrictive conditions which will vary from disaster to disaster and with the FEMA staff. FEMA is not there to fix everything, and is not there to rebuild it better or different than it was before the disaster.
31	The Stafford Act was written to provide limited monetary assistance, while protecting the Federal treasury.
32	FEMA's mission to deliver assistance in an effective, timely and cost -efficient manner serves too many masters. (Expand: Fast - Easy - Cheap) There is a discrepancy between the reimbursement process of the Public Assistance program and the practical needs of program applicants for initial funding, particularly with the lag time between spending the money and getting reimbursed.
33	According to a congressional report issued in 2011, the subjective nature of the Public Assistance program leads to inconsistency, unpredictability, and a perceived unfairness.[4] [Footnote 1]
34	The number of laws and regulations with which applicants must conform makes the Public Assistance program difficult to comply with. Some processes might be simplified, but others cannot be made less complex given the divergent nature of various Federal laws and regulations.

[4]Analysis of the FEMA Public Assistance (PA) Program, Final Task Report, 30 April 2011; Page 7; **"Key Finding 2:** The subjective nature of the PA Program authorities has led to inconsistency, unpredictability, and a perceived unfairness in many aspects of program implementation."

35	We must provide thorough documentation that the claimed damage is only the result of the specific disaster, and did not pre-exist the disaster in any way, i.e., deferred maintenance. This is where thorough maintenance records are so important.
36	We need to have an aggressive approach about seeking reimbursement, because, like the tax code, regulations governing Public Assistance program are subject to interpretation. This is where we should consider seasoned, experienced outside help which can be invaluable.
37	Most costs which can be directly tied to the disaster are reimbursable unless specifically excluded, but the exclusions can be significant. However, the costs must be properly documented and the work done must not violate FEMA and other non-FEMA Federal regulations.
38	Unlike other Federal grants, Public Assistance grants have a very long life cycle, often lasting for many years. At many points in this long life Public Assistance grants can be deobligated for a multitude of reasons, many of which will not arise until the work has been completed and paid for.
39	With the January 2013 passage of the Sandy Re-Authorization Act, Public Law 113-2, (Section 904© time limits for some projects are now 24 months from the date of approval. This puts ever increasing pressure on local government to rapidly repair or replace damaged facilities or risk losing the Public Assistance funding.
Current Law: List of Major Changes in FEMA's Public Assistance Program Since Hurricane Sandy	
40	There are more than 16 changes or pending changes in the Public Assistance program since January of 2013. January 2013: Sandy Recovery Improvement Act (SRIA) announced
41	May 2013: SRIA Alternate Procedures Pilot Program http://www.fema.gov/alternative-procedures
42	June 2013: SRIA Alternate Debris Management Procedures http://fema.gov/alternative-procedures
43	January 2014: Public Assistance Simplified Procedures Thresholds ($67k to $120K) https://www.fema.gov/media-library/assets/documents/90458
44	April 2104: Field Operations Pocket Guide http://www.fema.gov/media-library-data/1401828490941-5affbe7761193f29dbd24df694e2ad98/FEMA%20PA%20Pocket%20Guide.pdf

45	April 2014: Public Assistance Program Appeals http://www.fema.gov/media-library-data/1397834445770-cc9d428495f78f81b0fcbb7b0d79b63a/RecoveryDirectorateManual_PublicAssistanceProgramAppealProcedures+Version3.pdf
46	Field Guide for Procurement, December 2014, http://www.fema.gov/media-library/assets/documents/96773
47	December 2014: Title 2 of the Code of Federal Regulations Part 200 (aka the "Super Circular" http://www.gpo.gov/fdsys/pkg/FR-2013-12-26/pdf/2013-30465.pdf
48	June 2015: FEMA Recovery Policy on Insurance (FP206-086-1) http://www.fema.gov/media-library-data/1436442397459-a1a4197f9528308d6d190ceb14418327/FP206-086-1_PublicAssistancePolicyInsurance_062915.pdf
49	August 2015: Updated FEMA Schedule of Equipment Rates http://www.fema.gov/schedule-equipment-rates
50	January 2016: Public Assistance Program and Policy Guide http://www.fema.gov/public-assistance-policy-and-guidance
51	January 2016: Rule Proposal to Establish a Deductible for the Public Assistance Program https://www.federalregister.gov/articles/2016/01/20/2016-00997/establishing-a-deductible-for-femas-public-assistance-program
52	May 2016: Pricing Guide for Recipients and Subrecipients under the Uniform Rules (2 C.f.r. Pt. 200); http://www.fema.gov/media-library/assets/documents/96773
53	Pending Change: FEMA Public Assistance Re-engineering, not yet announced in California.
54	Changes are now pending in the Senate oh H.R. 1471, including the increase of small projects to $1,000,000, which has both positive and negative implications.
55	Proposed Building Codes changes.
Current Thinking on Disaster Cost Recovery	
56	Catastrophes are different than run-of-the-mill disasters. Multiple jurisdictions are affected, overwhelming both state and Federal agencies. Therefore we cannot expect to rely on more than limited assistance at the local level. Staff in the local agency will be overwhelmed by events even in the best prepared situations.

57	We must understand that FEMA and other Federal agencies see disasters from a very different perspective than ours. What we may consider an "emergency" situation may not be considered urgent by FEMA. (See FEMA 9580.4 "Emergency Work versus Emergency Contracting." Specifically, we need to understand how this different perspective affects our procurement activities.
58	Disaster recovery is extraordinarily difficult. "Political pressure and public scrutiny to "get money out the door" are heightened. Media interest in recovery efforts is high and increases around major anniversaries (e.g., one year after the event) and any notable failures in program implementation."
59	"Public expectations about the amount, pace, and flexibility of recovery funding are rarely met, because public officials tend to set unrealistic targets before they understand recovery issues.
60	"Receiving and spending recovery money can take a long time. Many aspects of disaster recovery take a long time, often due to factors outside local government's control.
61/ 62	"Government leaders leading recovery are confronted with a magnitude of resources and complexity of tasks they are (appropriately) unprepared to administer, so they often misjudge resources and skills required to deliver.
63	"Effective recovery governance requires commitment to bold organizational changes that leaders are often too risk-averse to make. Recovery is not "business as usual" for a government and therefore cannot rely on business-as-usual governance.
64	How can we improve this difficult series of challenges? "The first several months right in the aftermath of a disaster contributes significantly to the odds of a successful long-term recovery." [5]
65	We need a strategic cost recovery plan because there are so competing many variables that will need to be effectively managed. This is a years long process which most agencies have little or no recent experience and the amount of money in play will equal or exceed many years of capital improvement budgets
66	Instead of dealing with a single insurance claim, one at a time, there will be multiple simultaneous claims to manage. Local Joint Powers Authorities will be overwhelmed by the demand for services from their member agencies. Purchasing and contracting, policies and procedures, will be a key factor in getting and keeping all Federal funds

[5] See Footnote 2

67	Furthermore, the Federal government has been bearing an increasing share of the total cost of disasters. In Hurricane Hugo, the Federal government paid for only 23% of the total costs. In Hurricane Sandy, they paid for 80% of the losses.
68	Additionally, the share of disaster costs borne by FEMA is shrinking as a percentage of the total costs. In Hurricane Hugo and Loma Prieta, FEMA paid for 49% of the costs, while in Hurricane Sandy FEMA's share shrank to 23%, with the US Department of transportation paying 26% and the Department of Housing and Urban Development Paid for 32% of the losses.
69	If this trend continues, we not only have to know FEMA's Public Assistance program, but the programs of other Federal agencies which paid for 77% of the losses. Moreover, the Federal agencies are appropriating the money, but not paying it out quickly, which further delays the pace of recovery.
70	We should consider the need for executive level cost recovery advisor to work with elected officials and senior staff, a consultant, not an agency employee who is beholden to someone and trying to protect their job.
71	The smart money in both government and the private sector always consult with experts before undertaking new, large scale unfamiliar projects. Disaster cost recovery should be no different, particularly since the process is so different from other grant programs.
72	We need operational disaster cost recovery plans for many sub-elements of the cost recovery process: Continuity of Operations; Damage Assessment; Debris management and debris monitoring; Purchasing; Mutual aid (EMMA) management; Volunteer management; Donations management; and Project Worksheet file management.
73	FEMA grants are very different from any other Federal Grant. Unlike most other Federal grants, Public Assistance grants are not competitive. But also unlike other Federal grants, once awarded, Public Assistance grants can be and often are taken back for a variety of reasons.
74	FEMA large projects are reimbursement based. We spend the money and then get reimbursed months, or even years later. Much of FEMA's work is done by temporary employees, with sometimes limited experience. These minimally experienced employees rotate in and out at a pace which disrupts any continuity
75	Cost Recovery begins long before Day One of the disaster. Prior to the disaster, we need photographs and other documentary evidence, such as building plans and engineering drawings, inspections plans, inspection reports and evidence of ongoing maintenance to avoid deobligation because of deferred maintenance.

76	Cost Recovery begins long before Day One of the disaster. Particularly making damage assessments. We need to have an effective damage assessment plan to ensure that we are gathering and recording all the damages to agency facilities and infrastructure.
77	Damage Assessment is a much broader challenge than many agencies understand. It goes far beyond building inspections, and reports from facilities managers and highway engineers. It may include virtually every department within the agency and it certainly relies on significant input and management from the Finance Department
78	Repair project delays will be more costly than normal. Increasing cost of construction. Potential loss of Federal funding from deobligations..Higher cost of project financing and lag time for reimbursements.
79	Never assume that we can have enough documentation. It's always easier in the long run to get the documentation sooner rather than later. Later it may no longer be available for many reasons.
80	It may not be cost-effective for communities to maintain sufficient staff to handle the large number of Public Assistance applications necessary after a catastrophe. So, what is the agency's "Plan B?" Where would such help come from?
81	Agencies need to do a strategic financial risk assessment to monetize the annual costs of disasters to understand how much they should be spending on financial risk mitigation and cost recovery preparation. Failure to be prepared will be costly in the best of economic times and devastating in the worst of financial down cycles.
82	Ideally, we should get day-to-day benefits from our disaster cost recovery planning activities and resource commitments. However, it is difficult to justify spending when we don't know the benefits we could be receiving or what losses we are avoiding because we have a strong disaster cost recovery program.
83	We need to integrate FEMA requirements with our pre-disaster day-to-day activities so that we don't have to shift gears and change procedures when a disaster happens. We won't have time to do it, and we probably won't get it right often enough.
84	We will struggle with an intense community and organizational pressure to return to normal, while at the same time we have to go through a series of deliberately slow and costly processes like the NEPA, and historic preservation reviews.

85	Preparation now should focus on creating the simplest procedures possible, with extensive use of checklists to minimize the unsustainable high cost of continual training.
86	Getting a rapid infusion of Public Assistance funding will do little good if the projects aren't properly done and properly documented and the money is later deobligated by FEMA or questioned by the auditors.
87	In the cost recovery process, there is absolutely no substitute for recent and extensive experience with FEMA and the Public Assistance program. The less real experience staff has, the more important it is to have seasoned, experienced outside help
88	Local decision makers will often make the challenging Public Assistance process even more difficult by insisting on alternate and or improved projects.
Disaster Cost Recovery Best Practices	
89	First, and most importantly work on these issues as groups of cities, counties and private non-profits. Almost every agency needs to address these issues and there is no reason why the solutions should have to be paid for over and over again and why every agency should have to do the work repeatedly.
90	Develop a strategic disaster cost recovery plan. The comprehensive program that many agencies need cannot be created in a single document within a short time.
91	Re-write the agency purchasing ordinance to comply with Title 2 of the Code of Federal Regulations, Part 200. (80% of funding will be purchased via long term contracts and we are required to follow the most restrictive regulations, between our local regulations and 2 CFR, Part 200) Adopt a disaster purchasing ordinance to supplement the regular purchasing ordinance. (Explain the need for extra flexibility.)
92	Integrate the agency risk management function into the Cost Recovery Team and closely review the agency's insurance exposure vis-a-vis FEMA funding regulations. Agencies need to understand the "true" insurance policy coverage as measured against their actual coverage
93	Review our emergency operations plans and mutual aid agreements. Rather than look at them from a permissive perspective, we need to look at them from a restrictive perspective. How could FEMA use the plan or policy language to deny eligibility rather than extend eligibility?
94	Review existing local codes and ordinances to ensure that the agency has statutory authority for certain actions, such as debris clearance from private property for health and safety reasons.

95	Review all leases of agency facilities to and from other agencies, the private sector and private-non-profits to properly allocate damage repair responsibility and ensure agency eligibility.
96	Establish a disaster cost recovery team with the following elements/members: Cost Recovery Team Executive Level Manager [6]; Cost Recovery Support Team; Documentation File Manager[7]; Filing personnel; "Common" documents Clerk; Time lines Manager; Team Group Leaders (Public Safety, Survivors Services, Facilities, Infrastructure); Disaster Projects Procurement Team.;[8] Liaison for Environmental Issues; Liaison for Hazardous Materials Issues; Liaison for Insurance Issues' Liaison for Historic Preservation Issues; Public Assistance Subject Matter Expert (Consultant)
97	Develop a comprehensive damage assessment plan, which includes all facets of damage assessment, including public and private facilities, infrastructure and economic damages.
98	Have a single comprehensive list of all agency facilities to use as a master checklist for ensuring that all facilities are checked for damage. Prioritize the list by the nature of critical functions and potential for dollar loss.
99	Have good pre-event documentation, both written reports and photographs which shows the condition of facilities prior to the disaster. This is critical to establish eligibility and establish a record of regular maintenance to ensure eligibility.
100	Small agencies, if they have substantial damages, need to seriously consider getting outside help, because there is so much administrative overhead in the Public Assistance process. Furthermore, the regulations are very complex and applied with a great deal of variation depending on who the FEMA staff are and their level of experience.
101	FEMA and OES inspectors may pressure you to meet their production goals. Understand that: FEMA field inspectors have no authority to approve funding. Their job is to submit recommendations for assistance, for senior managers to approve or deny

[6]Improving Disaster Recovery: Lessons Learned in the United States, McKinsey & Co., June 2015

[7]Audit Tips For Managing Disaster-Related Project Costs, Audit OIG-16-109-D, July 1, 2016

[8]Put "in place a highly skilled procurement team. Recovery Procurement require a team experienced in running complex and ambiguous Procurement on rapid timetables. Agencies that may have relevant content knowledge for a recovery program (e.g., housing) may not have extensive procurement experience, given the nature of their non-disaster portfolio of programs, and therefore may not be the best source of recovery procurement staff." Improving Disaster Recovery: Lessons Learned in the United States, McKinsey & Co., June 2015

102	Do not, sign documents or approve requests over the phone at the request of any FEMA or OES field inspector, without proper authorization from the Cost Recovery Team Senior Manager. Never assume you have such approval authority unless it is in writing.
103	Train construction project managers and or hire FEMA experienced construction managers to avoid dangerous project decisions which can result in denial of FEMA funding. [Cite the University of Iowa 2 floods case.]
104	Adopt an agency-wide standard filing protocol to capture, organize and store all the documentation for the Project Worksheet files. Documentation will come from many different sources, both from within and from outside of the agency.
Time/Effort Tracking:	
105	Use the Appropriate Level of Documentation to Maximize the Collection of Data, Without Over Burdening Workers: Disaster Field Unit - Incident Work Report; ICS-214 (Modified); Sign-In Sheets With Work Logs; Other - Do your forms meet FEMA documentation requirements? (Cite the Nashville audit, OIG-16-112-D)
EOC Documentation / Support: Cost Recovery Documentation Tasks:	
106	Document the pre-existing conditions: *What* preparations were made, if any? Where are the reports and photos of that work? *Where* was the work done? *When* was the work done? *Who* did the work? *What equipment and materials were used, if any? Why* were these actions reasonable? How much did the work cost?
107	Document the damage done by the event. *Where* was the damage done? How did the disaster cause the damage? When was the damage reported? Who wrote damage reports and took photographs? Where are they filed? What is the scope of damage / scope of work to be done? How much will are repairs/replacement estimated to cost? How long will the repair/replacement take? Was the damage completely documented before any work was done?
108	*Document the repair/replacement work: What work was done to repair the damage? Where was the repair/replacement done? When* was the repair/replacement work done? We're there any environmental, historic or hazardous materials issues? *Who* did the work? *What equipment and materials were used, if any? How were these actions tied to the disaster?* How much did the work actually cost? What, if anything delayed the completion of the work and/or increased the costs of repair/replacement?

109	Documentation should include: Photographs (date stamped and geo-coded); Written damage reports; Affidavits of those involved; Working notes; Maps and sketches; Time cards; Field work reports; Equipment charge sheets; Invoices for rented equipment and purchased materials; Charge sheets for materials taken from stock; Any and all other work related documentation; First, photograph the damage; then the work as it is being done; and finally the project after work is finished.
110	The Documentation File Manager: The Documentation File Manager position supports both the damage repair/replacement and the cost recovery process within a single document management file system. Many different departments and functions will contribute a wide variety of documents and these documents need to be available to numerous personnel within the agency and from outside the agency, i.e., FEMA, OES, insurance, etc. Having a single standard filing structure will enable different people to properly file documents so that anyone, with proper access, can retrieve electronic copies easily and quickly, without damaging the integrity of the core documentation files.
111	The files will be used to file for both insurance claims and reimbursement from FEMA (and the state.) The filing structure will enable the agency to fully comply with internal tracking needs and meet the requirements of both FEMA and OES.
Principles for Effective Disaster Cost Recovery	
112	**Principle # 1: We must understand that both the state and Federal governments have substantially different perspectives and motivations than those of local governments.** None are wrong, but all are different. Ultimately the burden is on local officials to make the process work, because it is our community that has suffered damages and we cannot walk away as can the state and Federal officials.
113	Furthermore, our concepts and positions on recovery will not typically be well organized, cogent and cohesive. Within our own community, we will be divided on what to do and how the “to-do” list is prioritized. This will make it difficult for state and Federal agencies to assist us, when we ourselves may not be crystal clear on what we need and what we want. At this point in time, democracy and consensus may be required, but they are not advantages to quick recovery.

114/ 115	**Principle # 2: Cost recovery procedures should be simple as possible, while still meeting FEMA requirements.** In the middle of a disaster, complexity is not our friend. Specific and detailed plans may represent the correct way to deal with a problem, but if they aren't what we do on a daily basis, the plans won't be followed. Trying to follow complex and unfamiliar processes will slow us down and probably won't achieve the desired results. Furthermore, complex, and unfamiliar solutions will be error-prone under disaster induced time constraints. People operating under stress make mistakes, especially when working with unfamiliar procedures. The more complex the solution, the more likely the chances of making errors. Additionally, small errors will compound to create new unanticipated problems. Finally, those who are knowledgeable and trained may not be the persons available to perform the required, unfamiliar tasks.
116	**Principle # 3: Cost recovery procedures should be routine before a disaster occurs.** Untested and/or unused procedures are likely to fail in an actual disaster. When stressed, humans revert to previously learned behaviors. Therefore, if we weren't doing things necessary to meet FEMA requirements before a disaster, we likely won't change the processes rapidly and completely when the disaster occurs. Ideally the policies , procedures and processes we develop for effective cost recovery should also provide everyday benefits or they won't take root and last until a disaster happens. I subscribe to the Maryland state concept of dual use, daily use.
117	**Principle # 4: Cost recovery procedures should standard be throughout the agency.** Even though the employees of each different department will have different disaster related tasks, the fundamentals of cost tracking, and damage documentation will be the same regardless of the work being done. If we have different procedures for each department, the cost tracking process becomes geometrically more difficult. All documentation should be done with FEMA's standard end requirements in mind.
118/ 119	**Principle # 5: We cannot rely only on a single technology solution.** First, most disaster response management software is designed with the response, and only the response in mind. Very little disaster response management software is designed for the cost recovery process. There are no "expert" software systems that can provide a substitute for real world experience in dealing with the disaster cost recovery process. There are too many wild card variables to rely on current software. Therefore, we must have solid experience or well qualified and experienced outside help to navigate the cost recovery process. There are some databases out there, but they are still learning and none of them are "state of the art", although some are better than other.

120/ 121	**Principle # 6: The Incident Command System (ICS) was not designed primarily for disaster cost recovery.** The ICS is an excellent way to manage on-scene incidents, Emergency Operations Centers and Department Operations Centers. However, ICS was not designed for the often years long recovery and financial cost recovery processes. First of all, ICS is very top heavy with management, a luxury easily achieved and defended during an active, but short term crisis. However, the cost recovery process typically lasts for years and the financial and administrative personnel within an agency seldom can access the kind of overhead staffing usually found in the disaster response environment. Most ICS trained staff have little to do with cost recovery and in the long haul, disaster cost recovery staff seldom if ever use ICS. Second, ICS was designed to track incident activity and resources, not to handle the heavy infrastructure damage to roads and bridges, facilities and utilities that makes up the largest part of disaster cost recovery funding.
122	**Principle # 7: No matter how well we prepare, we will still have to improvise.** For all the commonality in disasters, every disaster has unique challenges that are often difficult, if not impossible to anticipate. FEMA staff, particularly "DAE's" or Disaster Assistance Employees have experience backgrounds that may range from almost none to substantial. This alone will cause substantial variations in how our projects are handled and we will need to approach these variable situations with an open and adaptable mind.
123	Projects will always take longer to complete. A July 2014 report[9] on FEMA Efficiency states "Moreover, there are currently 40 open disasters that are over 10 years old and represent tens of millions in unliquidated obligations to disasters going as far back as 1994." Project delays can often cause additional unanticipated problems to arise due to cost escalations and materials shortages.
124	**Principle # 8: Large scale disaster cost recovery may require outside professional assistance if staff does not recent experience with the Public Assistance program.** First, FEMA Public Assistance grants are very different from any other Federal grant. FEMA uses many temporary employees with varying degrees of experience. There is a high rate of turnover among this combined temporary and permanent workforce which hampers continuity of operations and consistent application of the rules. This will adversely affect our best efforts at continuity. (Cite Asad Khan's experience with the Port of Galveston.)

[9]"The Path to Efficiency: Making FEMA More Effective for Streamlined Disaster Operations." An Analysis by the Majority Staff of the Senate Subcommittee on Emergency Management, Intergovernmental Relations, and the District of Columbia Senate Homeland Security and Governmental Affairs Committee, July 24, 2014

125	FEMA Public Assistance grants are often deobligated after the work is done because of a failure to properly follow the complex regulations which apply. FEMA Public Assistance grants are often deobligated after they are awarded because of eligibility issues. Not all damage is automatically eligible. Some damage is never eligible; Some damage may be partially eligible; Some damage once eligible may be later determined ineligible depending on interpretation of the rules. (Cite the Nashville 2016 audit.)
126	**Principle # 9: All FEMA decisions are subject to audit by the Office of Inspector General (OIG).** Not all Project worksheets are audited by the OIG, but all Project Worksheets are subject to an audit, often years after the projects are completed and paid for. The audit findings can be minimal, and more of an administrative nuisance, but frequently audit findings seek to take back millions and tens of millions of dollars from local agencies. We see evidence of this in Public Law 113-3 which limits project times.
127	Also, FEMA can and does seek to deobligate funding years after the disasters occur. They also can and do deobligate committed funds when projects are not completed in a timely manner. And the larger the disaster and the larger the individual project, the more likely the chance of an audit.
128	**Principle # 10: The situation is not likely to improve much.** As a Federal agency, FEMA is pulled in many competing directions at the same time. FEMA is charged to rapidly distribute funding for disaster cost recovery. FEMA at the same time is charged with carefully determining the eligibility of each individual project. These two goals are often incompatible. As a result, FEMA often distributes funding first and then later takes it back when a project is deemed ineligible for one of a variety of reasons.
129	Even if FEMA were a perfectly run and model Federal agency, it would still be a Federal agency with all of the challenges which any Federal agency faces, persistent staffing shortages, relentless budgetary constraints, constantly changing political agendas, perpetual staff transitions, and unceasing modifications to regulations..
130	But FEMA's mission is even more difficult, because it almost always operates under a critical spotlight of crisis. Even if it were a "perfect" Federal agency, it would be difficult to measure up to the expectations of the public and the media to deal with usually unsolvable crises in an immediate turn around time frame.

131	Therefore there is a substantial burden on local government agencies to be as well prepared as possible to know what to do and how to do it regarding disaster cost recovery. Somehow, the system works, in an often painful and limited fashion. But it works much better when local government is knowledgeable about the process and prepared for the cost recovery process before disaster strikes.
132	**Principle # 11: We will be on our own more than we want to be.** The state offices of OES/OEM will be overwhelmed as we will be, but in a different way. Their staffing and funding is predicated on the normal flow of disasters. A catastrophic disaster will also overwhelm their ability to be all things to all agencies. This will require patience and understanding on our part and on theirs. They will bring in staff from other departments throughout state government, but those won't be seasoned veterans.
133	The same thing will happen with FEMA. They will bring in personnel from across the country, they will bring in Public Assistance contractors but they will be on temporary assignments. FEMA will hire on more DAE's, Disaster Assistance Employees, but they will also not be seasoned professionals with years of experience. And all this hiring will take time.
134	This is not a criticism of any agency, this is life. No level of government can afford to keep excess staff on the payroll for years waiting for the next catastrophic disaster. So we have to understand that this will be difficult in spite of the best intentions of everyone involved. Again this leads me back to the necessity to be as well prepared before the disaster as we can. There is hope, but it is irrevocably tied to hard work, effective planning and diligent preparation.
135	**Principle # 12: Solving the Problem**. To solve this problem is far beyond the purview of we emergency managers here in this room today. We need to reach out to those who truly have the most at risk in this post-disaster world, our finance directors, our risk managers, our procurement staff, our project managers, and most importantly of all, the senior leadership in each of our organizations.
136	Munich Re Natural Hazard Total Risk Index
137	I believe the key to getting their attention is to conduct a financial HIRA, a financial hazard identification and risk assessment. We know that the risk of a catastrophic earthquake in California is a certainty. For me the HIRA equation is quite simple, multiply the annual earthquake risk times the value of the infrastructure, our public and private buildings and all their contents. This will give us an astonishing number, the monetary value of all our possessions at risk.

138	We then look at how much we are spending each year to protect that value. Some agencies in this room may spend a few hundred thousand dollars a year on emergency management, but virtually nothing on preparedness for disaster cost recovery. Other agencies, I'm ashamed to admit may spend tens of thousands of dollars a year on part time emergency preparedness and less than nothing on cost recovery preparedness. And of course there are too many agencies that spend virtually nothing on emergency preparedness at all. Yet all of these agencies will wonder, scream and pout that neither FEMA nor the state is doing enough to help them even though they have done nothing to help themselves.
139	So, we take this astonishing number of value at risk and make a realistic assessment of what should be done to protect the trillions of dollars of property here in our state. Virtually every city, town and county in the state has both law enforcement and fire protection services because the risk of not having this protection is unthinkable. Why are we letting the financial risk run naked in the streets?
140	Once the loss potential is quantified, I believe leadership will begin to recognize the risk and allocate the time and money to being prepared.
141	The question then is how can we do this? I believe the data is available on My iPhone, There are two reports, one national and one for the State showing annualized earthquake losses. There are reports on shaking intensity and annualized chance of earthquakes of certain magnitude. I know there are seismologists, geologists and financial wizards out there who can mash this data into equations which are incomprehensible to me, but can be expressed with the clarity of $E=MC^2$. I believe we need to engage these scientists and mathematicians to help us provide our local leadership with a clear picture of the annualized disaster risk, regardless of the specific hazard, and come up with a realistic dollar amount which a prudent person would allocate to preparedness for disaster cost recovery. This will provide us with the capability to become, in the latest buzzword, truly resilient, because we in fact will then have access to the economic resources without which there can be no disaster recovery. This will all take planning and work, but the work must be shared with all those in the game, not just emergency managers. This will all take time, but we need to start now by educating others in our agencies about the true economic risks in play.
142	Parametric Insurance coverage to pay for disaster cost recovery consultants?
143	Mike Martinet mike_martinet@yahoo.com 415-500-5255